



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/808,680

03/25/2004

Francisco P. Maturana

04AB144

6191

63122

7590

10/06/2008

ROCKWELL AUTOMATION, INC./BF
ATTENTION: SUSAN M. DONAHUE, E-7F19
1201 SOUTH SECOND STREET
MILWAUKEE, WI 53204

EXAMINER

NGUYEN, VAN H

ART UNIT

PAPER NUMBER

2194

MAIL DATE

DELIVERY MODE

10/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/808,680	Applicant(s) MATURANA ET AL.	
	Examiner VAN H. NGUYEN	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/24/2005 and 01/03/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to the application filed 03/25/2004.

Claims 1-30 are presented for examination.

Oath/Declaration

2. The Office acknowledges receipt of a properly signed Oath/Declaration submitted 03/25/2004.

Information Disclosure Statement

3. The Applicants' Information Disclosure Statements - filed 01/24/2005 and 01/03/2008, have been received, entered into the record, and considered.

Drawings

4. The informal drawings are not of sufficient quality to permit examination. Accordingly, replacement drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to this Office action. The replacement sheet(s) should be labeled "Replacement Sheet" in

the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

Applicant is given a TWO MONTH time period to submit new drawings in compliance with 37 CFR 1.81. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a). Failure to timely submit replacement drawing sheets will result in ABANDONMENT of the application.

Specification

5. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The cross reference related to the application cited in the specification must be updated (i.e., update the relevant status, with PTO serial numbers or patent numbers where appropriate, on page 2). Correction is required.

Claim Objections

6. Claims 4, 6, 18, and 19 are objected to because of the following informalities: the **abbreviations** used in these claims should be defined.

Appropriate correction is required.

Double Patenting

7. The nonstatutory double patenting; rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. CIT. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Uogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 C.F.R.' 1.321(b) would overcome an actual or provisional rejection on this ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R.' 1.78(d).

Art Unit: 2194

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-30 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Pat. No. 7, 305, 272.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application and the Patent'272 are claiming common subject matter. The differences between the claims of the instant application and the claims of Patent'272 would have been obvious to a person of ordinary skill in the art at the time the invention was made, since the claims in the instant application represent the invention in broader scope.

Claims 1-30 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Pat. No. 7, 228, 187.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application and the Patent'187 are claiming common subject matter. The differences between the claims of the instant application and the claims of Patent'187 would have been obvious to a person of ordinary skill in the art at

Art Unit: 2194

the time the invention was made, since the claims in the instant application represent the invention in broader scope.

Claims 1-30 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Pat. No. 7, 146, 232.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application and the Patent'232 are claiming common subject matter. The differences between the claims of the instant application and the claims of Patent'232 would have been obvious to a person of ordinary skill in the art at the time the invention was made, since the claims in the instant application represent the invention in broader scope.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by **Somers** (US 6243396).

As to claim 1:

Somers teaches a controller capable of being employed in a distributed control system, wherein the distributed control system controls operations of a plurality of devices that operate together to perform a process (see the Abstract and Figs.3-5 and the associated text), the controller comprising:

at least one processing component configured to perform a first plurality of program portions that operate in relation with one another as a first agent, the plurality of program portions including a first program portion that controls agent-type behavior of the controller; and a second program portion that at least one of controls and monitors at least one of the devices (see the agent discussion, col.4, line 57-col.6, line 17); and

at least one memory component that stores a data table that is accessed by each of the first and second program portions to allow communication between the first and second program portions (see col.10, line 56-col.12, line 5).

As to claim 2:

Somers teaches actuator signals generated by the second program portion for controlling one of the devices are communicated to the device by way of the data table, and wherein

sensor signals generated by the device are communicated to the second program portion by way of the data table (see col.10, line 56-col.12, line 5).

As to claim 3:

Somers teaches the second program portion is written in a ladder logic format (see col.10, line 56-col.12, line 5).

As to claim 4:

Somers teaches at least a portion of the first program portion is written in a first language selected from the group consisting of C++, JAVA and another high-level programming language, and is capable of generating script-type messages in a second language selected from the group consisting of JDL, KQML and XML (see col.5, lines 12-47 and col.6, lines 18-57).

As to claim 5:

Somers teaches the agent-type behavior includes at least one of submitting requests for bids, and submitting bids, to other agents (see col.10, lines 51-53).

As to claim 6:

Somers teaches messages communicated between the first agent and other agents include a FIPA ACL wrapper (see col.5, lines 12-47 and col.6, lines 18-57).

As to claim 7:

Somers teaches the data table provides an array of memory locations that can be monitored and modified by each of the first and second program portions, and wherein monitoring of the data table occurs by at least one of direct polling and event-driven mechanisms (see col.10, line 56-col.12, line 5).

As to claim 8:

Somers teaches the first program portion is capable of modifying values stored in the data table, wherein the second program portion is capable of monitoring the values and capable of responding to changes occurring in the values, and wherein in at least some circumstances data table changes are affected by a priority of events (see Figs.3-4 and the associated text).

As to claim 9:

Somers teaches the second program portion is capable of modifying values stored in the data table, and the first program portion is capable of monitoring the values and capable of responding to changes occurring in the values (see Figs.3-4 and the associated text).

As to claim 10:

Somers teaches the second program portion provides a thread to the first program portion whenever the second program portion modifies the values, in order to notify the first

Art Unit: 2194

program portion that the modifications have occurred (see Figs.3-4 and the associated text).

As to claim 11:

Somers teaches the controller is one of an industrial controller and an industrial computer (see Figs.1-4 and the associated text).

As to claim 12:

Somers teaches a third program portion performed by the at least one processing component, wherein the third program portion at least one of controls and monitors a different one of the devices than the at least one device (see Figs.3-4 and the associated text).

As to claim 13:

Somers teaches a fourth program portion performed by the at least one processing component, wherein the fourth program portion controls additional agent-type behavior of the controller associated with a second agent, and wherein the fourth program portion is in communication with the third program portion by way of at least one of the first data table and a second data table (see Figs.3-4 and the associated text).

As to claim 14:

Somers teaches a third program portion performed by the at least one processing component, wherein the third program portion controls additional agent-type behavior of the controller associated with a second agent, and wherein the third program portion is in communication with at least one of the second program portion and a fourth program portion by way of at least one of the first data table and a second data table (see Figs.3-4 and the associated text).

As to claim 15:

Somers teaches the first program portion includes at least one of a planner portion, an execution controller portion, a diagnostics portion, an equipment model portion, an application-specific agent scripts portion and a generic interface program, wherein the programs are capable of interacting with one another and deploying industrial based firmware software and communication networks to fulfill control actions (see Figs.3-4 and the associated text).

As to claim 16:

Somers teaches distributed control system for controlling a distributed process performed by a plurality of devices (see the Abstract and Figs.3-5 and the associated text), the distributed control system comprising:

Art Unit: 2194

a first controller including a first processing component, wherein the first processing component is configured to perform a first program portion governing first agent-type behavior of a first agent implemented on the first controller, and a second program portion governing operation of at least a first of the devices; and a second controller including a second processing component, wherein the second processing component is configured to perform a third program portion governing second agent-type behavior of a second agent implemented on the second controller, and a fourth program portion governing operation of at least a second of the devices; wherein the first and second controllers are in communication by way of a network (see Figs.3-5 and the associated text); and

wherein the first program portion is in communication with the second program portion by way of a first data table, and the third program portion is in communication with the fourth program portion by way of a second data table (see col.10, line 56-col.12, line 5).

As to claim 17:

Somers teaches each of the second and fourth program portions is written in a ladder logic format (see col.10, line 56-col.12, line 5).

As to claim 18:

Somers teaches each of the first and third program portions is capable of generating and processing messages written in a language selected from the group consisting of JDL,

XML and KQML (see col.5, lines 12-47 and col.6, lines 18-57).

As to claim 19:

Somers teaches the messages generated and processed by the first controller and the third controller are wrapped in FIPA ACL information (see col.5, lines 12-47 and col.6, lines 18-57).

As to claim 20:

Somers teaches a means for communicating with a third controller of an external organization, wherein the third controller includes a third processing component, wherein the third processing component is configured to perform a fifth program portion governing agent-type behavior (see Figs.3-5 and the associated text).

As to claim 21:

Somers teaches the first program portion includes at least one of a planner portion, an execution controller portion, a diagnostics portion, an equipment model portion, an application-specific agent scripts portion and a generic interface portion (see Figs.3-5 and the associated text).

As to claim 22:

Somers teaches the first and second agent-type behavior includes conducting negotiations with other agents (see col.10, line 56-col.12, line 5).

As to claim 23:

Somers teaches first communications between the second program portion and the first device also occur by way of the first data table, and second communications between the fourth program portion and the second device also occur by way of the second data table (see col.10, line 56-col.12, line 5).

As to claim 24:

Somers teaches in a controller of a distributed control system, wherein the distributed control system operates to control a plurality of devices to perform a process, a method of communicating information between a first program portion and a second program portion, the method comprising: providing a data table that is accessible by each of the first and second program portions, wherein the first program portion is configured to govern agent-type behavior of the controller and the second program portion is configured to at least one of control and monitor a first device of the plurality of devices; sending first data from one of the first and second program portions to modify a value of the data table; and providing the modified value of the data table to the other of the first and second program portions, wherein the other of the first and second program portions experiences a change in its operation in response to the modified value (see the Abstract and Figs.3-5 and the associated text).

As to claim 25:

Somers teaches generating a thread between the first and second program portions when the modifying of the value has occurred (see col.10, line 56-col.12, line 5).

As to claim 26:

Somers teaches communicating second data between the device and the first program portion by way of the data table (see col.10, line 56-col.12, line 5).

As to claim 27:

Somers teaches the program portion that receives the modified value is the first program portion that governs agent-type behavior, and wherein the modified value is representative of at least one of a piece of data and an event (see Figs.3-4 and the associated text).

As to claim 28:

Somers teaches in response to receiving the modified value, the first program portion matches the modified value with an application-specific script (see Figs.3-4 and the associated text).

As to claim 29:

Somers teaches in response to receiving the modified value, the first program portion performs at least one action including at least one of the following: sends at least one of an additional piece of data and an additional event to the data table to cause a change in operation of at least one of the first program portion and an external device; and modifies an operation in relation to another agent other than a first agent including the first and second program portions (see Figs.3-4 and the associated text).

As to claim 30:

Somers teaches the action is performed by one of a planner and an execution controller based upon an application-specific agent script (see Figs.3-4 and the associated text)..

Conclusion

9. The prior art made of record, see PTO 892, and not relied upon is considered pertinent to applicant's disclosure. Applicant should review these references carefully before responding to this office action.

Art Unit: 2194

Contact Information

10. Any inquiry or a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM 6:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MENG-AI AN can be reached at (571) 272-3756.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/VAN H NGUYEN/
Primary Examiner, Art Unit 2194**